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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,756	06/23/2003	Sung-Deuk Kim	P-0554	5728

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P.O. Box 221200		
Chantilly, VA 20153-1200	ART UNIT	PAPER NUMBER
	2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	**Applicant(s)**
Office Action Summary	10/600,756	KIM, SUNG-DEUK
	Examiner	**Art Unit**	
	Blanche Wong	2616	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*19 June 2007*</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,8-23 and 25-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,9-11,13-23 and 26-31* is/are rejected.

7)☒ Claim(s) *3,8,12,25 and 32-34* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed June 19, 2007 have been fully considered but they are not persuasive.

With regard to claims 1,6,11,17,23,28, the amendments introduce 112 rejections.

Claim Objections

2.   Claims 1,6,11,23 are objected to because of the following informalities:

With regard to claims 1,6,11,23, Examiner suggests spelling out the abbreviation CRC when it is used for the first time.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4.   **Claims 17-22 and 28-31** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendment "without inserting a substitute data block" is not disclosed in the specification.

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.   **Claims 1,3-6,8-10,23,25-27,32,33** are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

With regard to claims 1,6,11,23, it is unclear what is "CRC fail".

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   **Claim 1,4,5,23,26,27** are rejected under 35 U.S.C. 102(b) as being anticipated

by Sellin et al. (U.S. Pat No. 5,491,719).

With regard to claims 1 and 23, Sellin discloses

detecting an error in a data block **(identify blocks which have had errors)**

which has passed an uplink radio section **(uplink) ("the MSC uplink error detector**

and handler 219 can identify blocks which have had errors introduced during the

transmission", col. 5, lines 17-19);

inserting **(adding)** a CRC code **(error detection code/CRC code)** into the data

block **(data into the block format) (the base station block formatter 217 formats ...**

data into the block format 301 by adding ... the error detection code field 307",

col. 5, lines 13-16; "the error detection code is a CRC code", col. 5, lines 2-3; see

also CRC 307 in Fig. 3);

transmitting the data block with the CRC code to a receiving side **(MSC) (uplink transmitting from BS to MSC in Fig. 2)**; and

performing a concealment operation **(does not output the block)** on the error data block when the error data block is transmitted to and judged to be CRC fail in the receiving side **(an error being detected) ("in the event of an error being detected ..., the MSC uplink error detection and handler 219 does not output the block... ", col. 5, lines 28-31)**.

With regard to claims 4 and 26, Sellin discloses a CRC code **("the error detection code is a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3)** that is generated and inserted **(adding) (the base station block formatter 217 formats ... data into the block format 301 by adding ... the error detection code field 307", col. 5, lines 13-16)** by a base station system **(base station)** of a transmitting side.

With regard to claims 5 and 27, Sellin discloses a base station **(base station transceiver 103 in Fig. 1)**, a radio network controller **(base station controller 101 in Fig. 1)**, and a mobile switching center **(MSC in Fig. 1)**.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

10.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11.   **Claims 6,9,10** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sellin in view of Ohmi et al. (U.S. Pat No. 5,550,756) and Suma et al. (U.S. Pat No.

4,680,763).

With regard to claim 6, Sellin discloses

checking whether an error exists in a data block **(identify blocks which have**

had errors) which has passed an uplink radio section **(uplink)** **("the MSC uplink error**

detector and handler 219 can identify blocks which have had errors introduced

during the transmission", col. 5, lines 17-19);

inserting **(adding)** a CRC code **(error detection code/CRC code)** into the data

block **(data into the block format) (the base station block formatter 217 formats ...**

data into the block format 301 by adding ... the error detection code field 307",

col. 5, lines 13-16; "the error detection code is a CRC code", col. 5, lines 2-3; see

also CRC 307 in Fig. 3) if the data is detected to have an error **(the use of a CRC**

code is inherent to detect an error);

detecting the data block containing the CRC code on a receiving side **(MSC)**

(uplink transmitting from BS to MSC in Fig. 2); and

generating a CRC fail based on detection of the CRC code **(in the event of an**

error being detected) ("in the event of an error being detected ..., the MSC uplink

error detection and handler 219 does not output the block... ", col. 5, lines 28-31).

However, Sellin fails to explicitly show reporting detection of an error to an image

application and performing a concealment operation on the data block by the image

application.

Ohmi discloses reporting detection of an error **(detects an error) (the image receiving unit 111 comprises ... a receiving unit 22 ... , col. 9, lines 33-34, and a receiving unit 22 ... detects an error ..., col. 9, lines 47-48)** to an image application **(image receiving unit) (the image receiving unit 111 receives a data packet and reproduces an image from ... the received data packet, col. 9, lines 37-40)**. Suma discloses performing a concealment operation **(error concealment operation)** on the data block by the image application **(error concealment operation, col. 4, lines 7-8; see also error concealment circuit 53 in Fig. 4)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine reporting detection of an error to an image application as taught in Ohmi and performing a concealment operation on the data block by the image application as taught in Suma with Sellin eliminate bursty error due to fading which is unique to a radio line (Ohmi, col. 1,line 35) and to reduce the probability that a reproduced data is judged to be erroneous (Suma, col. 4,lines 10-12).

With regard to claim 9, the combination of Sellin and Ohmi discloses the method of claim 6. Sellin further discloses a CRC code **("the error detection code is a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3)** that is generated and inserted **(adding) (the base station block formatter 217 formats ... data into the block format 301 by adding ... the error detection code field 307", col. 5, lines 13-16)** by a base station system **(BS)** of a transmitting side.

With regard to claim 10, the combination of Sellin and Ohmi discloses the

method of claim 9. Sellin further discloses a base station **(base station transceiver**

103 in Fig. 1), a radio network controller **(base station controller 101 in Fig. 1)**, and a

mobile switching center **(MSC in Fig. 1)**.

12.   **Claims 11,13-22,28-31** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sellin in view of Suma.

With regard to claim 11, Sellin discloses

checking whether an error exists in a data block **(identify blocks which have**

had errors) which has passed an uplink radio section **(uplink)** **("the MSC uplink error**

detector and handler 219 can identify blocks which have had errors introduced

during the transmission", col. 5, lines 17-19);

inserting **(adding)** a CRC code **(error detection code/CRC code)** into the data

block **(data into the block format)** **(the base station block formatter 217 formats ...**

data into the block format 301 by adding ... the error detection code field 307",

col. 5, lines 13-16; "the error detection code is a CRC code", col. 5, lines 2-3; see

also CRC 307 in Fig. 3) if the data is detected to have an error **(the use of a CRC**

code is inherent to detect an error);

detecting the data block containing the CRC code on a receiving side **(MSC)**

(uplink transmitting from BS to MSC in Fig. 2); and

generating a CRC fail based on detection of the CRC code **(in the event of an**

error being detected) **("in the event of an error being detected ..., the MSC uplink**

error detection and handler 219 does not output the block... ", col. 5, lines 28-31);

stopping a decoding operation on the data block **(does not output) ("in the**

event of an error being detected ..., the MSC uplink error detection and handler

219 does not output the block... ", col. 5, lines 28-31).

However, Sellin fails to explicitly show performing a concealment operation based on

the CRC fail.

Suma discloses performing a concealment operation **(error concealment**

operation) based on the CRC fail (error) (error concealment operation, col. 4, lines

7-8; see also error concealment circuit 53 in Fig. 4).

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine performing a concealment operation based on the CRC fail as

taught in Suma with Sellin to reduce the probability that a reproduced data is judged to

be erroneous. Suma, col. 4,lines 10-12.

With regard to claim 13, the combination of Sellin and suma discloses the

method of claim 11. Sellin further discloses a CRC code **("the error detection code is**

a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3) that is generated and

inserted **(adding) (the base station block formatter 217 formats ... data into the**

block format 301 by adding ... the error detection code field 307", col. 5, lines 13-

16) by a base station system **(BS)** of a transmitting side.

With regard to claim 14, the combination of Sellin and Suma discloses the

method of claim 13. Sellin further discloses a base station **(base station transceiver**

103 in Fig. 1), a radio network controller **(base station controller 101 in Fig. 1)**, and a

mobile switching center **(MSC in Fig. 1)**.

With regard to claim 15, the combination of Sellin and Suma discloses the

method of claim 11. Sellin further discloses an originating terminal **(mobile station 105**

in Fig. 1) and a radio network controller **(base station controller 101 in Fig. 1)**.

With regard to claim 16, the combination of Sellin and Suma discloses the

method of claim 11.

Suma further discloses moving picture information **(image, col. 4, line 9)**.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine moving picture information as taught in Suma with Sellin to

provide for images.

With regard to claims 17,28,29, Sellin discloses

detecting that data block which has passed an uplink radio section **(uplink)** has

an error **(identify blocks which have had errors)** ("the MSC uplink error detector

and handler 219 can identify blocks which have had errors introduced during the

transmission", col. 5, lines 17-19);

blocking transmission of the data block **(does not output the block)** ("in the

event of an error being detected ..., the MSC uplink error detection and handler

219 does not output the block... ", col. 5, lines 28-31); and

determining that the data block has not been timely received by the receiving

side **(error)** based on an undetected transmission sequence number **(error detection**

code/parity bits) corresponding to the data block **(the base station block formatter**

217 formats ... data into the block format 301 by adding ... the error detection

code field 307", col. 5, lines 13-16; "the error detection code is a CRC code", col.

5, lines 2-3; see also CRC 307 in Fig. 3; 7 parity bits, col. 6,lines 58).

However, Sellin fails to explicitly show performing a concealment operation on the data

block not timely received.

Suma discloses performing a concealment operation **(error concealment**

operation) on the data block not timely received **(error) (error concealment**

operation, col. 4, lines 7-8; see also error concealment circuit 53 in Fig. 4).

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine performing a concealment operation on the data block not

timely received as taught in Suma with Sellin to reduce the probability that a reproduced

data is judged to be erroneous. Suma, col. 4,lines 10-12.

With regard to claims 18 and 30, the combination of Sellin and Suma discloses a

method of claim 17 and a system of claim 28. Sellin further discloses a base station

system **(see base station controller 101 and base station transceiver 103 in Fig. 1)**

of the transmitting side.

With regards to claims 19 and 31, the combination of Sellin and Suma discloses a method of claim 17 and a system of claim 28. Sellin further discloses a base station **(base station transceiver 103 in Fig. 1)**, a radio network controller **(base station controller 101 in Fig. 1)**, and a mobile switching center **(MSC in Fig. 1)**.

With regard to claim 20, the combination of Sellin and Suma discloses the method of claim 17. Sellin further discloses an originating terminal **(mobile station 105 in Fig. 1)** and a radio network controller **(base station controller 101 in Fig. 1)**.

With regard to claim 21, the combination of Sellin and Suma discloses the method of claim 17.

Suma further discloses moving picture information **(image, col. 4, line 9)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include moving picture information in Suma in Sellin. The suggestion/motivation for doing so would have been to provide for images. Suma, col. 4,line 9. Therefore, it would have been obvious to combine Suma with Sellin for the benefit of moving picture information, to obtain the invention as specified in claim 21.

With regard to claim 22, the combination of Sellin and Suma discloses the method of claim 17. Sellin further discloses a data transmission to the receiving terminal that is performed based on a circuit network transmission method **(digital switching) (PCM link 107, col. 2, line 57-58)(it is inherent there is some digital switching in a digital cellular communication system)**.

Allowable Subject Matter

13.   Claims 3,8,12,25,32-34 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

Conclusion

14.   Applicant's amendment necessitated the new ground(s) of rejection presented in
this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP
§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37
CFR 1.136(a).
       A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
the advisory action. In no event, however, will the statutory period for reply expire later
than SIX MONTHS from the date of this final action.

15.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Blanche Wong whose telephone number is 571-272-
3177. The examiner can normally be reached on Monday through Friday, 830am to
530pm.
       If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for
the organization where this application or proceeding is assigned is 571-273-8300.
       Information regarding the status of an application may be obtained from the
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BW
August 27, 2007

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